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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
TSOY, ELENA	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/614,731	HUTCHINSON ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 52-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19 and 52-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

Amendment filed on 11/01/2005 has been entered. New claims 52-57 have been added. Claims 1-19 and 52-57 are pending in the application.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 5, 12, 14-17, 52-54, 57 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Bonnebat et al (US 4,731,266).

Obviously, a solution or dispersion of a Phenoxy-type Thermoplastic material such as poly(hydroxyamino ether) of Patent '883 would either in water or organic solvent.

Patent '883 fails to teach that: (i) a second coating layer of the aqueous coating dispersion is applied over said first coating layer (Claim 1); more than one layer of barrier coating are applied (Claim 3); (ii) each layer is substantially dried before applying next layer (Claim 1).

As to (i), It is a well-known principle to reapply a coating composition to achieve a desired thickness of a final coating depending on intended use of the final coated product.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have reapplied a coating dispersion in Patent '883, according to well-known principle, with the expectation of providing the desired thickness of a final coating.

As to (ii), Bonnebat et al teach that while forming a stack of several successive layers of barrier coatings by aqueous coating to obtain the desired thickness, each layer should be suitably dried before applying next layer because the surface layer will hinder the drying of the lower layers and separation can result if drying is not carried out. A multiplicity of coating and drying operations can be carried out in order to deposit thick layers (See column 3, lines 39-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied more than one layer of barrier coating in Patent '883 with suitably drying including claimed substantially drying each layer before applying next layer with the expectation of providing the desired thickness and prevent hindering of drying of the lower layers and separation, as taught by Bonnebat et al.

3. Claim 2 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883. Although the conflicting claims are not identical, they are not patentably distinct from each other because a solution or dispersion of a Phenoxy-type Thermoplastic material such as poly(hydroxyamino ether) of '883 would either in water or organic solvent.

4. Claims 4-7, 9-12, 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Bonnebat et al, further in view of Kennedy (US 4,505,951) for the reasons of record set forth in paragraph 4 of the Office Action mailed on 5/02/2005.

5. Claims 6, 8, 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Bonnebat et al, further in view of Cobbs, Jr et al (US 4,573,429) for the reasons of record set forth in paragraph 5 of the Office Action mailed on 5/02/2005.

6. Claim 18 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Bonnebat et al, further in view of Dworak et al (US 6,350,796) for the reasons of record set forth in paragraph 6 of the Office Action mailed on 5/02/2005.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 2 stands rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kennedy (US 4,505,951) for the reasons of record set forth in paragraph 9 of the Office Action mailed on 5/02/2005.

10. Claims 1-2, 4-9, 11, 14, 19, 52-53, 57 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maruhashi (US 4,393,106).

Maruhashi discloses a process for making coated plastic containers such as *preforms* (See column 11, lines 64-65) or *bottles* comprising applying onto the outer surface of the container a coating layer 6 of an *aqueous* latex (claimed dispersion) of a (thermoplastic) polyvinylidene chloride (See column 2, lines 42-57) comprising 20 wt % of glycidyl methacrylate (claimed epoxy resin) (See column 16, lines 17-18) by known coating methods such as dip coating, spray coating, brush coating, roller coating, cast coating (See column 10, lines 26-31), *sufficiently* drying the coated bottle-shaped container at 40-160^{0}C for 2 seconds to 60 minutes (See column 11, lines 19-24) using perfect oven (See column 15, lines 62-63), air circulated oven (See column 16, lines 41-42) or ultraviolet rays so as to crosslink the resin coating (See column 11, lines 31-34); applying to the *sufficiently* dried layer 6 a protecting layer 7 (See Fig. 1; column 4, lines 1-6) of a thermoplastic film-forming resin (See column 8, lines 44-48) comprising **epoxy** resin (See column 9, lines 26-32, 39-43) by *known* coating methods such as dip coating, spray coating, brush coating, roller coating, cast coating (See column 10, lines 60-67), *sufficiently* drying the coated bottle-shaped container at 40-160^{0}C for 2 seconds to 60 minutes (See column 11, lines 25-30) using hot air or ultraviolet rays so as to crosslink the resin coating (See column 11, lines 31-34), then heat treating at 30-150^{0}C for 5 seconds to 7 days after the drying operation, if desired (See column 11, lines 25-30). Polyethylene terephthalate may be used as a plastic bottle substrate (See column 7, lines 60-63; column 8, lines 3-4).

It is the Examiner's position that the article would exhibit substantially no blushing or whitening when exposed to water because it is made by a process substantially identical to that of claimed invention.

It is the Examiner's position that the container is withdrawn from the dip, spray, or cast coating at a rate so as to remove excess of a coating material and form a first coherent film inherently. If this position could be argued, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have withdrawn the container from the dip, spray, or cast coating in Maruhashi at such a rate so that to remove excess of a coating material and form the desired coherent film.

As to claim 14, the coatings have gas barrier properties (See column 2, lines 57-68) and UV-protected (See column 12, lines 44-45).

11. Claims 3, 19, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi.

Maruhashi is applied here for the same reasons as above. Maruhashi fails to teach that more than one layer of latex or epoxy resin coating are applied.

It is a well-known principle to reapply a coating composition to achieve a desired thickness of a final coating depending on intended use of the final coated product.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have reapplied a coating dispersion in Maruhashi, according to well-known principle, with the expectation of providing the desired thickness of a final coating.

As to claims 55-56, it is well known in the art that cast coating can be carried out using a flow coater.

It is held that it is within the level of ordinary skill to operate a process continuously. In re Dilnot 138 USPQ 248 (CCPA 1963); In re Korpi 73 USPQ 229 (CCPA 1947); In re Lincoln 53 USPQ 40 (CCPA 1942).

12. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Cobbs, Jr et al (US 4,573,429).

Maruhashi is applied here for the same reasons as above. Maruhashi fails to teach that the process further comprises the removal of any excess material between the coating and curing/drying steps (Claim 8), the article is *rotated* to achieve consistent coating and curing/drying (Claim 13).

Cobbs, Jr et al teach that a container can be coated by spraying a coating material (See Fig. 1) by rotating the container in front of one or more airless spray nozzles to achieve complete coating of the outside surface to be coated (See column 6, lines 33-43; column 9, lines 10-14) and thereby removing any excess material. The coating was dried to a tack-free or dry to the touch state by radiant heating by continuing rotation of the bottle over a hot plate (See column 12, lines 14-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coated a container of Maruhashi by spraying the container while rotating and drying the container while rotating with the expectation of providing the desired complete uniform coating of the outside surface to be coated, as taught by Cobbs, Jr et al.

13. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Kennedy (US 4,505,951).

Maruhashi is applied here for the same reasons as above. Maruhashi fails to teach that the coatings are dried using infrared heating (Claim 12) together with a forced air (Claim 10).

Kennedy teaches drying a water-based latex of polyvinylidene chloride coating on the outer surface of PET container or preform applied by known means such as spraying, dipping, flow coating or roller coating (See column 2, lines 59-61) by simultaneously heating the latex on

the container or preform with infra-red light energy and blowing cooling air (claimed forced air) at a temperature of about 40^0F to 60^0F (See column 3, lines 6-24; column 4, lines 1-13) allows preventing undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid (See column 1, lines 35-39).

As to claim 10, It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used infrared energy to heat coatings in Maruhashi with the expectation of providing the desired sufficiently dried coatings since Kennedy teaches that infrared energy can be used for heat-drying the coatings.

As to claim 12, It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used infra-red light energy and blowing cooling air in Maruhashi at a temperature of about 40^0F to 60^0F with the expectation of preventing undesirable shrinkage of the container while maximizing the removal of liquids without prematurely sealing the surface which would entrap unexpelled liquid, as taught by Kennedy.

14. Claims 15-17 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha (US 5,472,753).

Maruhashi is applied here for the same reasons as above. Maruhashi fails to teach that the epoxy resin coating comprises phenoxy resins (Claims 15, 54); the phenoxy resin coating comprises hydroxy-phenoxyether polymers (Claim 16); the hydroxy-phenoxyether polymer coating comprises polyhydroxyaminoether copolymers made from resorcinol diglycidyl ether, hydroquinone diglycidyl ether, bisphenol A diglycidyl ether, or mixtures thereof (Claim 17).

Farha teaches that a phenoxy-type thermoplastic (See Abstract) such as poly(hydroxy amino ethers) (See column 3, line 45) is suitable for forming an outer layer of a multilayer coated PET bottles (See column 2, lines 56-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a phenoxy-type thermoplastic such as poly(hydroxy amino ethers) as thermoplastic epoxy resin of a protecting layer 7 in Maruhashi since Farha teaches that a phenoxy-type thermoplastic such as poly(hydroxy amino ethers) is suitable for forming an outer layer of a multilayer coated PET bottles.

It is held that the selection of a known material based on its **suitability for its intended use** supported a *prima facie obviousness determination* in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945).

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha, further in view of Dworak et al (US 6,350,796).

Maruhashi in view of Farha are applied here for the same reasons as above. Maruhashi in view of Farha fail to teach that solution or dispersion of the thermoplastic epoxy resin comprises organic acid salts made from the reaction of polyhydroxyaminoethers with phosphoric acid, lactic acid, malic acid, citric acid, acetic acid, glycolic acid and/or mixtures thereof.

Dworak et al teach that an epoxy-amine adduct is at least partly neutralized with an aqueous acid, preferably an organic acid such as lactic acid or citric acid, and is dispersed by addition of water, preferably in a plurality of portions, with thorough mixing (See column 4, lines 26-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have neutralized polyhydroxyaminoethers of Maruhashi in view of Farha with an

organic acid such as lactic acid or citric acid with the expectation of providing the desired solution or dispersion in water, as taught by Dworak et al.

Response to Arguments

16. Applicant's arguments with respect to claims 1-19 and 52-57 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-142323. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELENA TSOY
PRIMARY EXAMINER

Elena Tsoy
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Art Unit 1762

December 28, 2005